



NUTRITION AND THE ORTHOPEDIC PATIENT

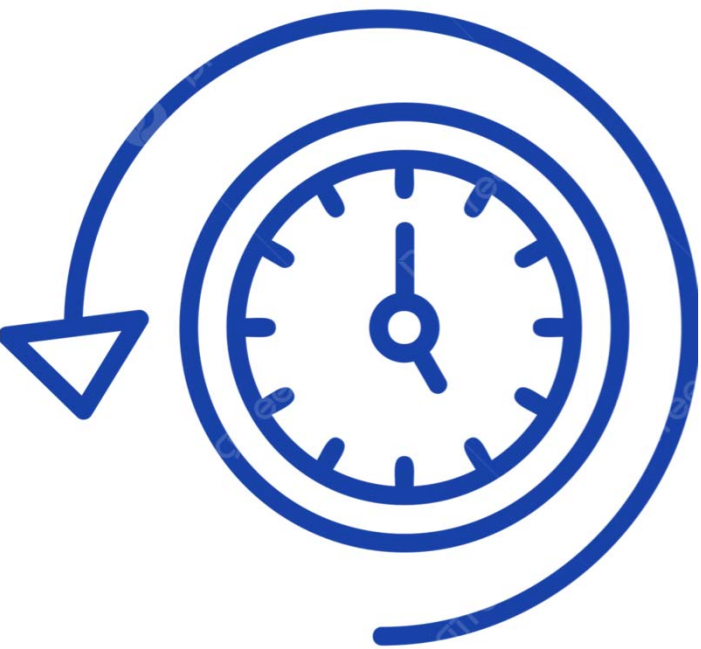
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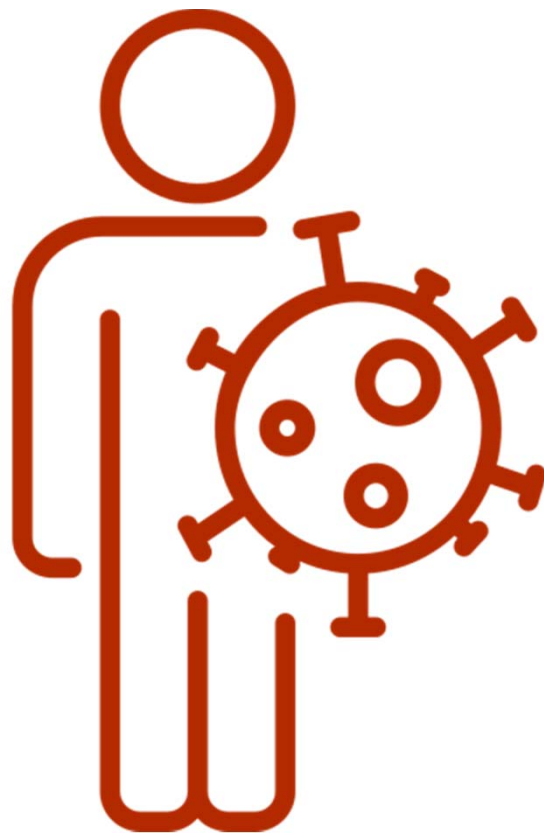
OVERVIEW

- Role of Nutrition
 - Key Nutrients
 - Phases of Recovery
 - Gut Health
 - Challenges
 - Considerations
- 

THE ROLE OF NUTRITION



OPTIMIZE RECOVERY TIME



REDUCE INFECTION RISK



ENHANCE ENERGY LEVELS

KEY NUTRIENTS



Protein

Building and Repairing Tissue



Vitamins and Minerals

Supporting Recovery



Hydration

Essential for Healing



PLANT-BASED FOODS PACKED WITH PROTEIN



*(protein per 1 cup, cooked)



PROTEIN-RICH DAIRY & EGG



PROTEIN

1.5 – 2.0 GRAMS OF PROTEIN PER KILOGRAM BODY WEIGHT



OMEGA-3 FATTY ACIDS

1 – 1.5 GRAMS

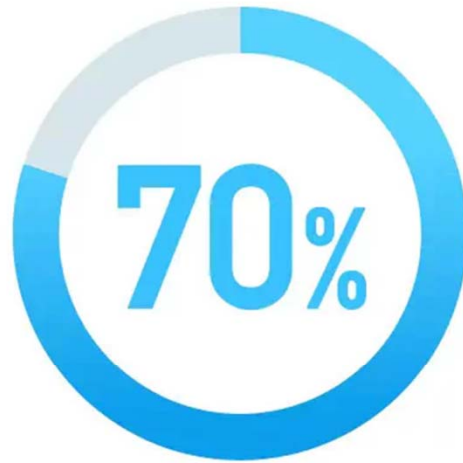
IRON AND VITAMIN B12

8 MILLIGRAMS / 2.4 MICROGRAMS

VITAMIN A

900 MICROGRAMS

HUMAN BODY WATER LEVEL



PHASES OF RECOVERY

Tissue damage – whether from surgery or injury –
kicks off a 3-stage recovery process.



1ST STAGE: Inflammation

Pain, swelling, redness
and heat; draws healing
chemicals to the
injured area.



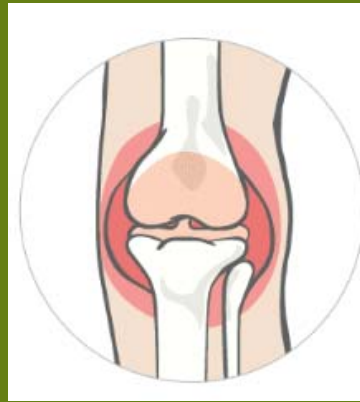
2ND STAGE: Proliferation

Damaged tissues are
removed; new blood
supply and temporary
tissue is built.



3RD STAGE: Remodeling

Stronger, more
permanent tissue
replaces temporary
tissue.



PHASE 1

INFLAMMATION



Inflammation is critical as it triggers the repair process. Too much, however, can cause additional damage.



EAT MORE ANTI-INFLAMMATORY FATS LIKE:



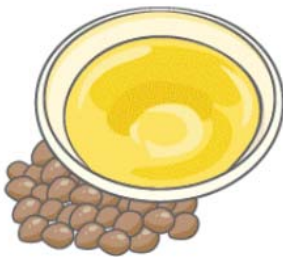
OLIVE OIL



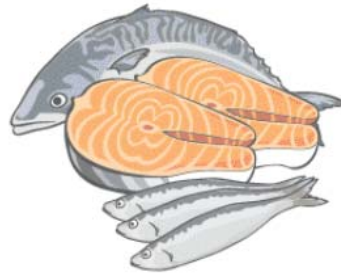
AVOCADOS



FISH OIL



**FLAX OIL OR
GROUND FLAX**



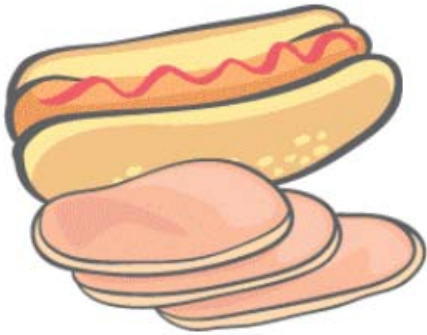
**FISH LIKE MACKEREL,
SALMON, SARDINES**



**MIXED NUTS
AND SEEDS**



EAT FEWER PRO-INFLAMMATORY THINGS LIKE:



**PROCESSED FOODS
HIGH IN SATURATED
FATS**



**VEGETABLE OILS
LIKE CORN, SUNFLOWER,
SAFFLOWER, SOYBEAN**



**FOODS WITH
TRANS FATS**



CURCUMIN FROM TURMERIC/CURRY POWDER

7 tsp a day of powder or 400-600mg
in supplement form.

GARLIC

2-4 cloves a day or 600-1200mg of aged
garlic extract.



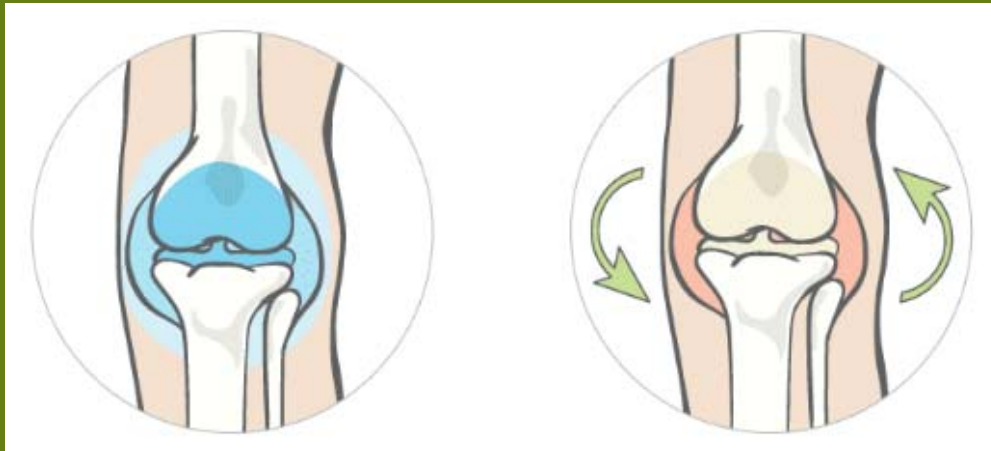
BROMELAIN FROM PINEAPPLE

2 cups of pineapple a day
or 500-1000mg in supplement form.

COCOA, TEA AND BERRIES

Eat daily or supplement with blueberry
or grape extracts, green tea extracts, citrus
extracts and bioflavonoid supplements.





PHASE 2 & 3

PROLIFERATION AND REMODELING



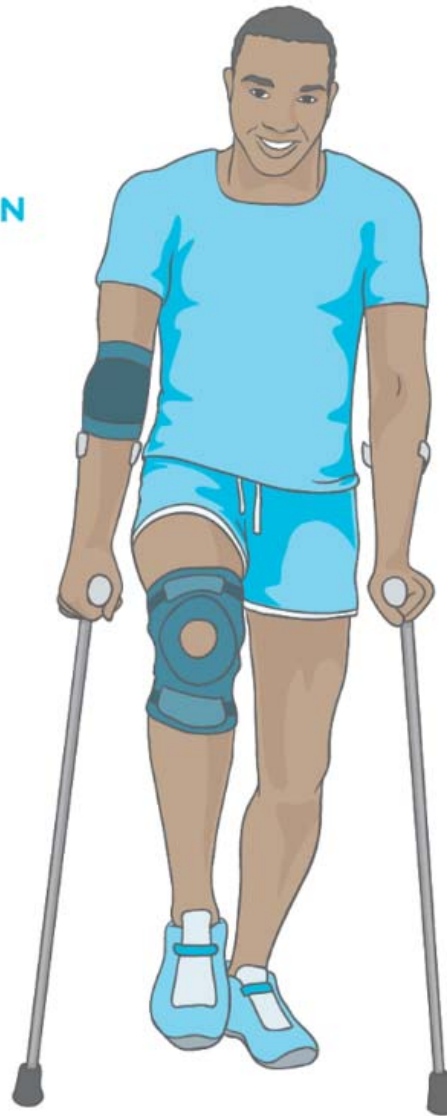
EAT ADEQUATE PROTEIN



BALANCE DIETARY FAT

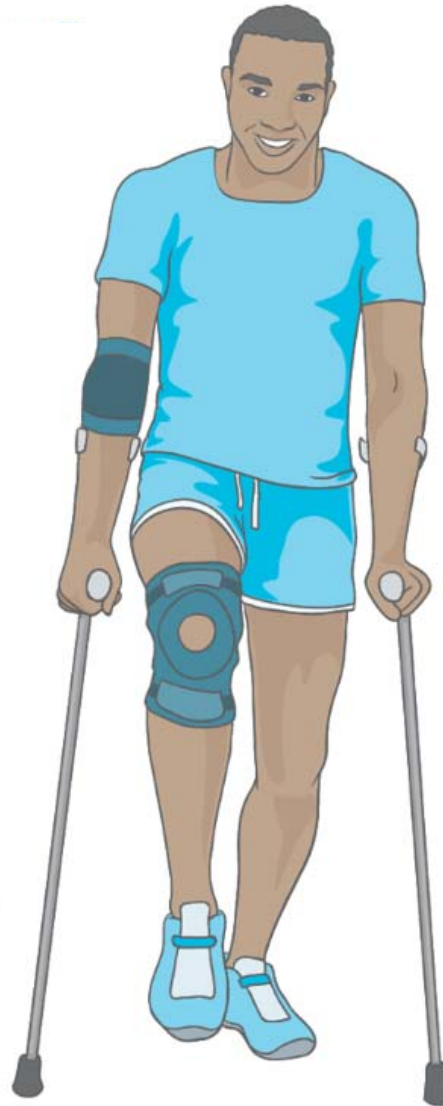


EAT THE RAINBOW



EAT A BALANCED DIET
WITH ADEQUATE
CALORIES

Energy intake is 1st priority:
Metabolism can increase from 15-50%

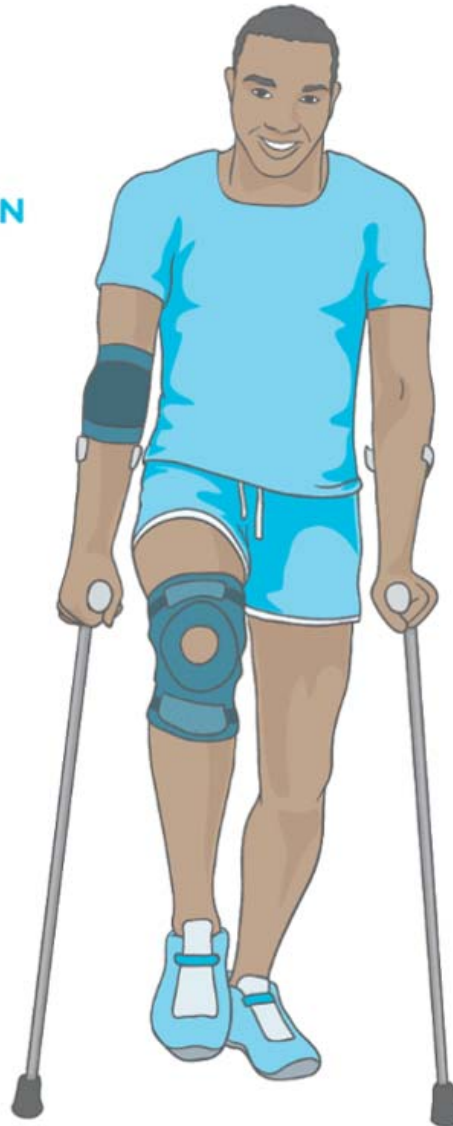


ADEQUATE CALORIES

15 – 20 calories per lb. of body weight



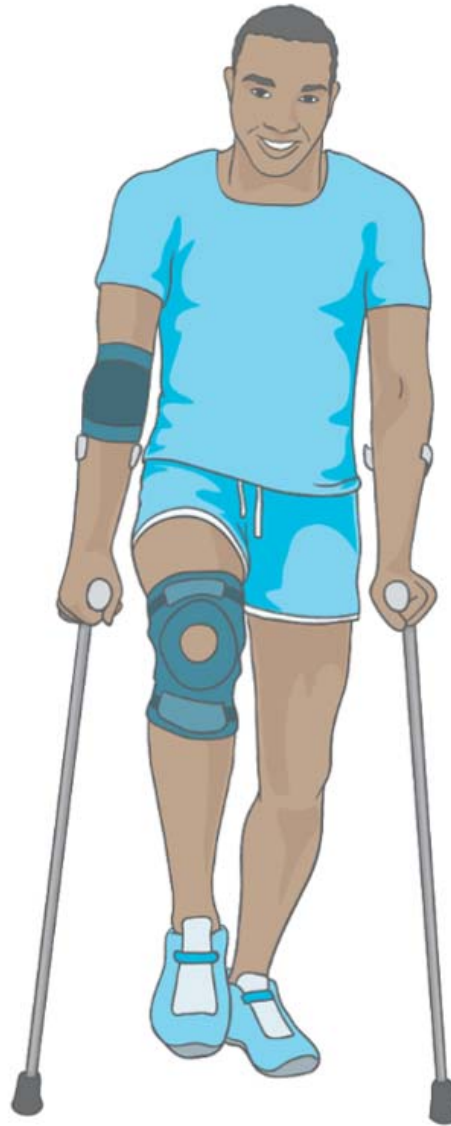
EAT ADEQUATE PROTEIN



HEALTHY
PROTEIN



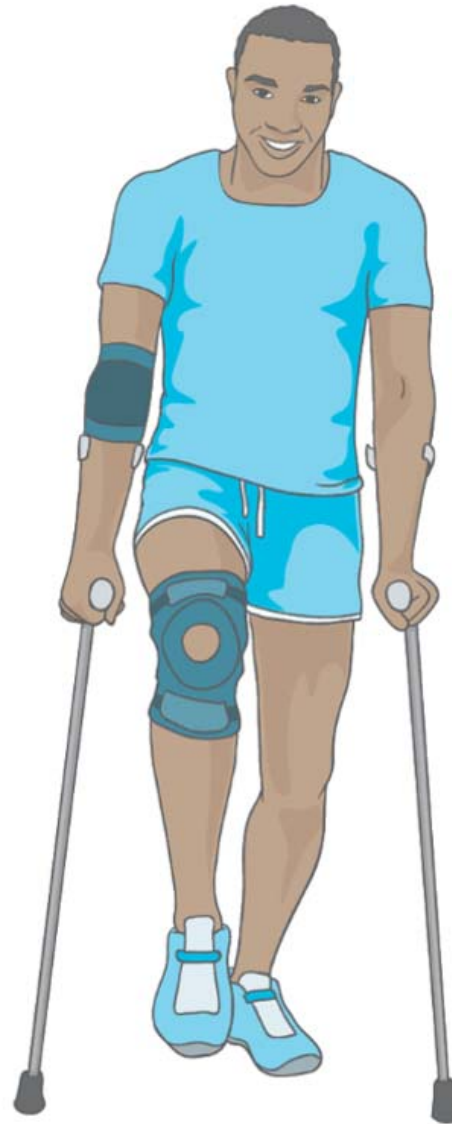
BALANCE DIETARY FAT



HEALTHY
FATS



EAT THE RAINBOW



FRUITS AND
VEGETABLES

GUT HEALTH



PREBIOTICS

Dietary fibres from grains, beans or leafy greens that feed your gut bacteria



The Food



PROBIOTICS

Beneficial gut bacteria that ferment dietary fibres and prebiotics



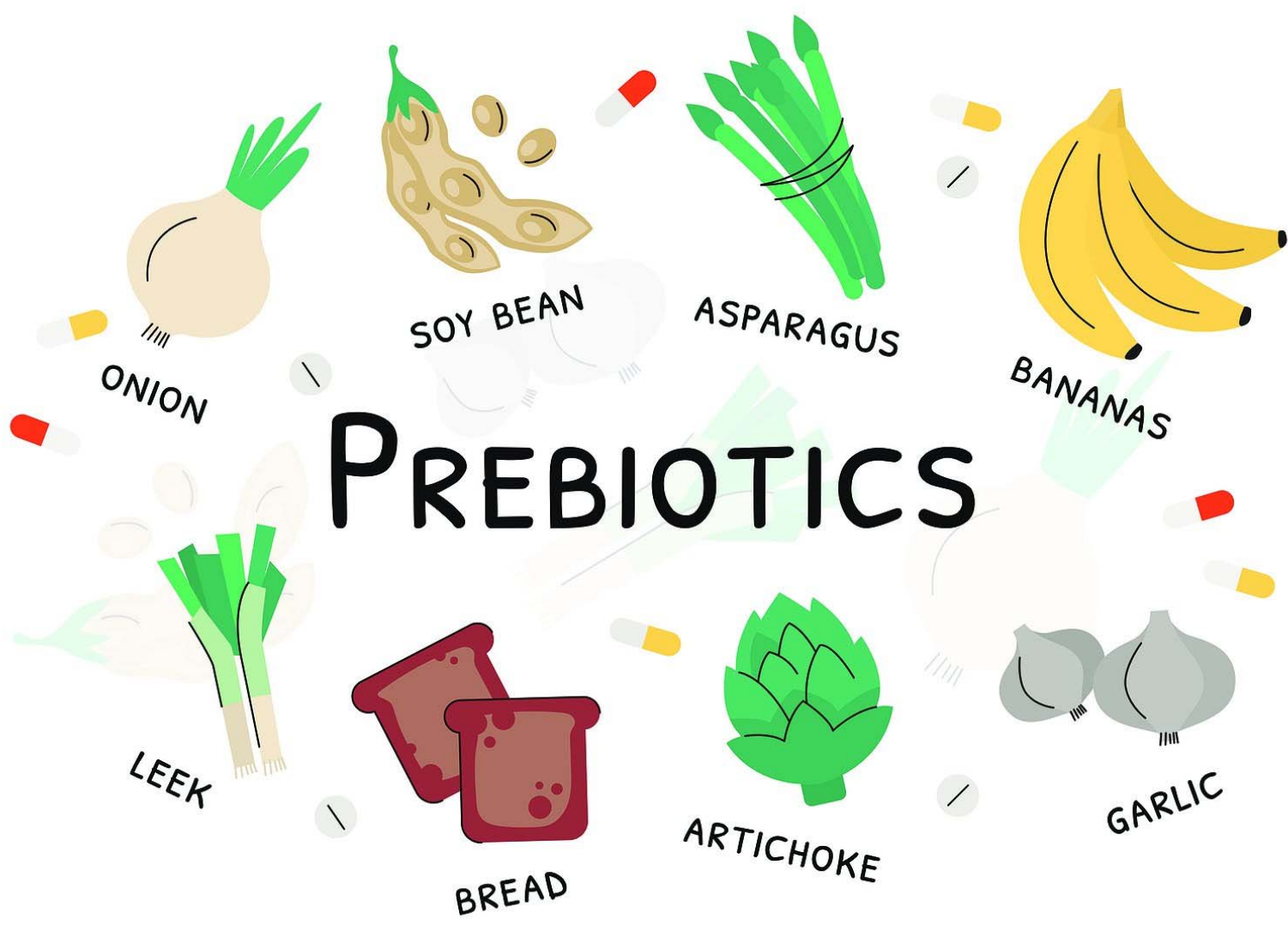
The Good Bugs

POSTBIOTICS

Byproducts or metabolites produced by probiotics that are believed to support whole-body wellness



The Metabolites



ONION

SOY BEAN

ASPARAGUS

BANANAS

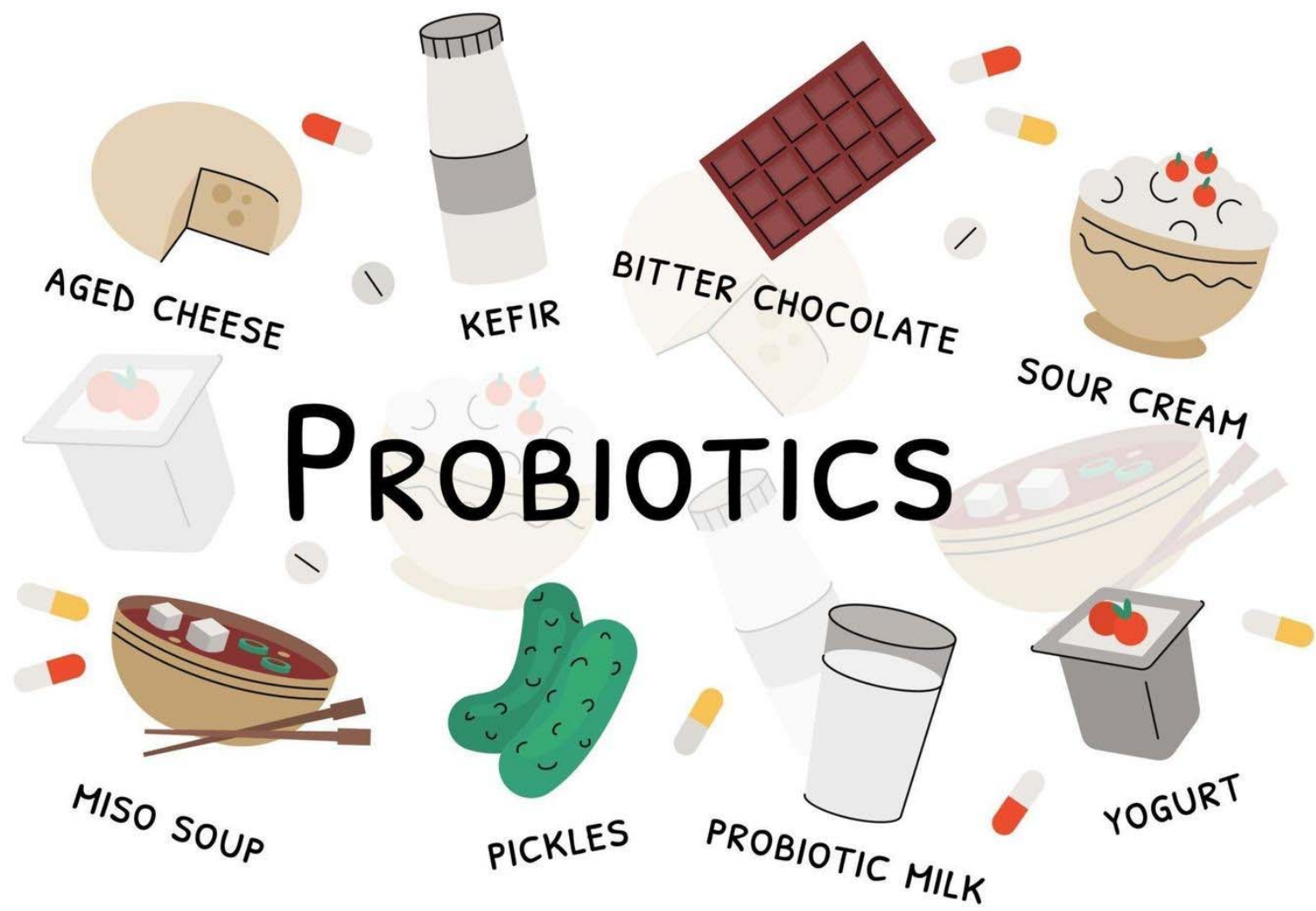
PREBIOTICS

LEEK

BREAD

ARTICHOKE

GARLIC



AGED CHEESE

KEFIR

BITTER CHOCOLATE

SOUR CREAM

PROBIOTICS


MISO SOUP

PICKLES

PROBIOTIC MILK

YOGURT

POSTBIOTICS



- VARIOUS NUTRIENTS**
B-vitamins, vitamin K and various amino acids
- ANTIMICROBIAL PEPTIDES**
Natural antibiotics that suppress the growth of bad bacteria.
- SHORT CHAIN FATTY ACIDS**
Optimize acid/base balance in GI tract, promote growth of good bacteria, and suppress pathogens!
- CARBOHYDRATE-ACTIVE ENZYMES**
Helps probiotics digest fibers to produce postbiotics
- HYDROGEN PEROXIDE**
Suppresses the growth of Candida and other yeasts

CONSIDERATIONS

PRE-SURGICAL NUTRITION



BODY WEIGHT AND WEIGHT MANAGEMENT



PERSONALIZED NUTRITION PLANS



ALCOHOL AND TOBACCO ABSTINENCE



NO ALCOHOL
& NICOTINE

CHALLENGES



REDUCED
APPETITE



PHYSICAL
CONSTRAINTS

SUMMARY



Protein

Building and Repairing Tissue



Vitamins and Minerals

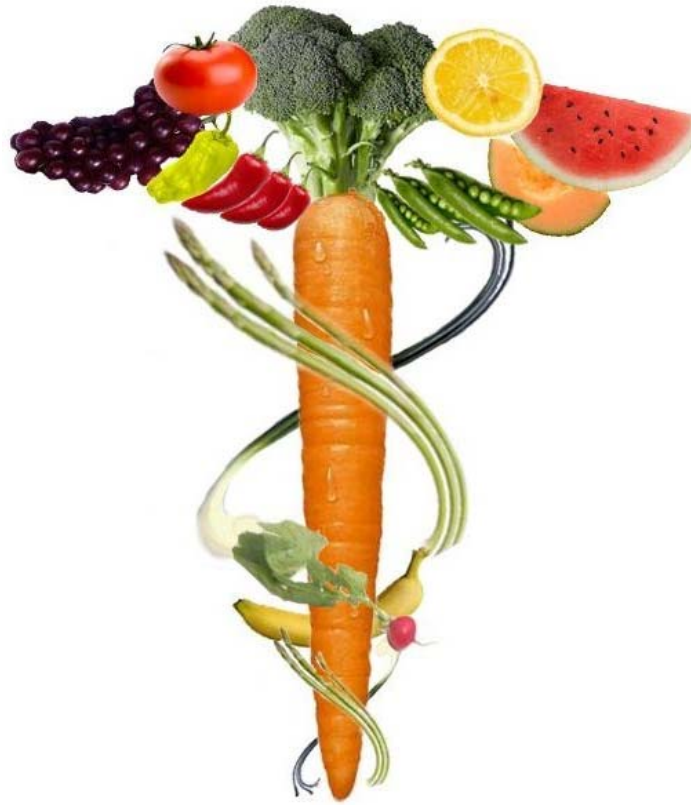
Supporting Recovery



Hydration

Essential for Healing





THANK YOU!

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